Contents

Solution photophysics and electronic structure of polysilanes 367
J. Michl (Boulder, CO, USA)

Exciton fusion and charge-carrier generation in poly(di-n-hexylsilane) 387
R. G. Kepler, C. H. Seager (Albuquerque, NM, USA), Z. G. Soos and P. C. M. McWilliams (Princeton, NJ, USA)

Time-resolved studies of electronic transport in Si and Ge backbone polymers. 395
M. A. Abkowitz and M. Stoka (Webster, NY, USA)

Energy dissipation via radiative recombination and vibronic relaxation in σ-delocalized silicon backbone network polymers 407
W. L. Wilson and T. W. Weidman (Murray Hill, NJ, USA)

Resonance enhancement effect in non-linear optical susceptibility of polysilanes 415
Y. Iwasa, T. Hasegawa, T. Koda, Y. Tokura (Tokyo, Japan), H. Tachibana and Y. Kawabata (Tsukuba, Ibaraki, Japan)

Luminescence and picosecond photoinduced absorption of polyaniline 423
K. Kim, L. B. Lin, J. M. Ginder, T. L. Gustafson and A. J. Epstein (Columbus, OH, USA)

Ultrafast non-linear optical properties and photoinduced relaxation dynamics of poly(2,5-thienylenevinylene) 429
S. D. Halle, M. Yoshizawa, T. Kobayashi (Tokyo, Japan), H. Murata, T. Tsutsui and S. Saito (Fukuoka, Japan)

Photoinduced charge-carrier generation and transport in thin-film polydiacetylene single crystals 439
Y. Yang, J. Y. Lee, J. Kumar, A. K. Jain, S. K. Tripathy (Lowell, MA, USA), H. Matsuda, S. Okada and H. Nakanishi (Tsukuba, Ibaraki, Japan)

Conductivity, optical absorption, photoluminescence, and X-band optically detected magnetic resonance of novel poly(2,5-dibutoxy-*para*phenyleneacetylene) (PDBOPA) 447
Q.-X. Ni, L. S. Swanson, P. A. Lane, J. Shinar, Y. W. Ding, S. Ijadi-Maghsoodi and T. J. Barton (Ames, IA, USA)

Optical probes of polydiethynylsilanes 453
Z. V. Vardeny, X. Wei, S. G. Han, K. S. Wong, L. X. Zheng, G. S. Kanner (Salt Lake City, UT, USA), J. Shinar, Y. Pang, S. Ijadi-Maghsoodi, T. J. Barton (Ames, IA, USA), S. Grigoras and B. Parbhoo (Midland, MI, USA)

Photomodulation spectroscopy of soluble polyacetylene 461
G. Lanzani, G. Kanner, S. Jeglinski and Z. V. Vardeny (Salt Lake City, UT, USA)

Search for photoinduced absorption in materials with non-one-half band fillings 469
G. Minton and J. W. Brill (Lexington, KY, USA)

Triplet polaronic excitons in conducting polymers: an X-band optically detected magnetic resonance (ODMR) study 473
L. S. Swanson, P. A. Lane, J. Shinar (Ames, IA, USA), K. Yoshino (Osaka, Japan) and F. Wudl (Santa Barbara, CA, USA)

Optically detected magnetic resonance (ODMR) of polarons and charge-conjugation symmetry in conducting polymers 481
L. S. Swanson, J. Shinar, P. A. Lane, B. C. Hess (Ames, IA, USA) and F. Wudl (Santa Barbara, CA, USA)

Gel chromism and anomalous luminescence in poly(3-alkylthiophene) 491
K. Yoshino, S. Morita and R. Sugimoto (Suita, Osaka, Japan)

Vacuum ultraviolet spectroscopy of the optical properties and electronic structure of seven poly(di-alkylsilanes) 499
R. H. French, J. S. Meth (Wilmington, DE, USA), J. R. G. Thorne, R. M. Hochstrasser (Philadelphia, PA, USA) and R. D. Miller (San Jose, CA, USA)

Electroabsorption in polydiethynylsilane and soluble *trans*-$(CH)_x$ 509
S. Jeglinski and Z. V. Vardeny (Salt Lake City, UT, USA)

Electro-absorption in a polydiacetylene 517
Y. Kawabe (Chiba, Japan and Tucson, AZ, USA), F. Jarka, N. Peyghambarian, D. Guo, S. Mazumdar (Tucson, AZ, USA), S. N. Dixit (Livermore, CA, USA) and F. Kajzar (Gif-sur-Yvette, France)

Vibrational analysis of the reduced form of polyaniline: the leucoemeraldine base 525
S. Quillard, G. Louarn, J. P. Buisson, S. Lefrant (Nantes, France), J. Masters and A. G. MacDiarmid (Philadelphia, PA, USA)

Photoluminescence in solid films of C_{60} 531
S. C. Graham, K. Pichler, R. H. Friend (Cambridge, UK), W. J. Romanow, J. P. McCauley Jr., N. Coustel, J. E. Fischer and A. B. Smith III (Philadelphia, PA, USA)

Searching for low-band-gap conjugated polymers by LHS calculations 537
J. Kürti (Budapest, Hungary and Vienna, Austria), P. R. Surján (Budapest, Hungary) and M. Kertesz (Washington, DC, USA)

Resonant Raman scattering study of undoped fullerene thin films 543
D. Dick, R. E. Benner, Z. V. Vardeny (Salt Lake City, UT, USA), D. Moses, V. I. Srdanov and F. Wudl (Santa Barbara, CA, USA)

Optical characterization of excited states in films of undoped C_{60} 549
X. Wei, Z. V. Vardeny (Salt Lake City, UT, USA), D. Moses, V. I. Srdanov and F. Wudl (Santa Barbara, CA, USA)

Electroabsorption studies of undoped C_{60} thin films 557
S. Jeglinski, Z. V. Vardeny (Salt Lake City, UT, USA), D. Moses, V. I. Srdanov and F. Wudl (Santa Barbara, CA, USA)

Ultrafast relaxation in conjugated polymers with large optical nonlinearity 565
T. Kobayashi (Tokyo, Japan)

Picosecond and c.w. optical probes of polydiacetylene at high pressure 583
B. C. Hess (Fresno, CA, USA and Salt Lake City, UT, USA), L.-X. Zheng, G. S. Kanner, Z. V. Vardeny (Salt Lake City, UT, USA) and G. L. Baker (Red Banks, NJ, USA)

Subpicosecond photoinduced absorption in poly[2,5-thienylene vinylene] and poly[3-methoxy-6-(2-ethyl-hexyloxy) phenylene vinylene] 593
M. B. Sinclair (Albuquerque, NM, USA), D. McBranch, T. W. Hagler and A. J. Heeger (Santa Barbara, CA, USA)

Dynamics of photogenerated soliton pairs in polyacetylene 603
A. Terai (Tokyo, Japan) and Y. Ono (Funabashi, Chiba, Japan)

Decay mechanisms of photoexcitations in conducting polymers probed by picosecond photoinduced absorption 611
G. S. Kanner and Z. V. Vardeny (Salt Lake City, UT, USA)

Optically detected magnetic resonance (ODMR) studies of conducting polymers: an overview 621
J. Shinar and L. S. Swanson (Ames, IA, USA)

Triplet states and optical absorptions in finite polyenes and conjugated polymers 631
D. K. Campbell, H.-Q. Lin (Los Alamos, NM, USA), J. Tinka Gammel (Los Alamos, NM, USA and San Diego, CA, USA) and E. Y. Loh, Jr. (Cambridge, MA, USA)

Photoexcitation of spin states in conducting polymers studied by the spin-dependent photomodulation technique. 647
X. Wei, B. C. Hess and Z. V. Vardeny (Salt Lake City, UT, USA)

Electric field effects on Wannier excitons in polydiacetylenes and their contribution to third-order susceptibility 655
G. Weiser (Marburg, Germany)

Unified picture of three models for the resonance Raman effect in polyenes. . . . 665
J. Kürti (Vienna, Austria and Budapest, Hungary) and H. Kuzmany (Vienna, Austria)

Photoinduced bidirectional phase transitions in single crystals of polydiacetylenes 675
Y. Tokura, S. Koshihara, T. Koda (Tokyo, Japan) and K. Takeda (Tsukuba, Japan)

Anomalous hole burning in polymers with inhomogeneous broadening 683
D. L. Lin, X. Li (Buffalo, NY, USA) and T. F. George (Pullman, WA, USA)

Author Index of Volumes 49 and 50 689

Subject Index of Volumes 49 and 50. 691

Please note that the page numbering for these Proceedings is continuous throughout Volumes 49 and 50, and Author and Subject Indexes are published at the end of this volume.